This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claims 1-20 (CANCELLED).

21. (Currently Amended) A method for treating migraine headaches~~, cortical spreading depression,~~ and symptoms of ~~such conditions~~ migraine headaches in a ~~mammalian~~ human subject in need thereof comprising administering an effective amount of a treatment composition comprising a Na^+ K^+2Cl^- cotransporter antagonist that is capable of inhibiting Na^+ K^+2Cl^- cotransport in glial cells to the central nervous system (CNS) of the subject.

22. (CANCELLED)

23. (CANCELLED)

24. (CANCELLED)

25. (Previously presented) The method of claim 21, additionally comprising administering an effective amount of a blood brain barrier permeability enhancer.

26. (Previously presented) The method of claim 21, additionally comprising administering a hyperosmotic agent.

27. (Currently amended) The method of claim ~~23~~ 21, wherein the ~~loop diuretic~~ treatment composition is selected from the group consisting of furosemide, ~~and~~ furosemide-related compositions, bumetanide and ethacrynic acid.

28. (Currently amended) The method of claim ~~27~~ 21, additionally comprising administering one or more agents selected from the group consisting of anticonvulsants and non-steroidal anti-inflammatory drugs.

29. (Previously presented) The method of claim 28, wherein one of said anticonvulsant agents is divalproex sodium.

30. (CANCELLED)

31. (CANCELLED)

32. (CANCELLED)

33. (Previously presented) The method of claim 25, wherein the blood brain barrier permeability enhancer is selected from the group consisting of leukotrienes, bradykinin agonists, histamine, tight junction disruptors, hyperosmotic solutions, cytoskeletal contracting agents and short chain alkylglycerols.

34. (CANCELLED)

35. (Currently Amended) A method for ~~treating cortical spreading depression and migraine symptoms~~ reversing prolonged migraine aura in a human in need thereof ~~such treatment~~, comprising ~~selecting a $Na^+K^+2Cl^-$ cotransporter antagonist that is effective in inhibiting synchronized neuronal population discharges in the CNS of a mammal without decreasing excitatory synaptic transmission, and~~ administering ~~said~~ a $Na^+K^+2Cl^-$ cotransporter antagonist that is capable of inhibiting $Na^+ K^+2Cl^-$ cotransport in glial cells to the central nervous system of said human in an amount that is effective in ameliorating or aborting said ~~symptoms~~ prolonged migraine aura.

36. (Currently amended) The method of claim 35, wherein the $Na^+K^+2Cl^-$ cotransporter antagonist blocks spontaneous synchronized depolarizing oscillations of neuronal population activity in the central nervous system.

37. (Currently amended) The method of claim 35, wherein ~~said $Na^+K^+Cl^-$~~ the $Na^+K^+2Cl^-$ cotransporter antagonist produces modulation of the chloride concentration in extracellular space in the central nervous system.

38. (Currently amended) A method for treating a human patient who suffers from migraine headaches ~~, cortical spreading depression~~ and premonitory symptoms of migraine headaches, comprising administering an effective therapeutic amount of a treatment composition comprising a loop diuretic ~~selected from the group consisting of furosemide and furosemide related compositions~~ to said patient using a delivery regimen that provides an effective therapeutic amount of the loop diuretic to the CNS, wherein said symptoms are ameliorated by said treatment.

39. (Previously presented) The method of claim 38, additionally comprising administering an effective amount of a blood brain barrier permeability enhancer.

40. (Previously presented) The method of claim 38, wherein the treatment composition is formulated to facilitate crossing of the blood brain barrier.

41. (Currently amended) The method of claim ~~27~~ 21, wherein the ~~loop diuretic~~ $Na^+K^+2Cl^-$ cotransporter antagonist is administered intranasally.

42. (Previously presented) The method of claim 38, wherein the loop diuretic is administered intranasally.

43. (Currently amended) The method of claim ~~27~~ 21, wherein the ~~loop diuretic~~ $Na^+K^+2Cl^-$ cotransporter antagonist is administered directly into the cerebrospinal fluid.

44. (Previously presented) The method of claim 38, wherein the loop diuretic is administered directly into the cerebrospinal fluid.

45. (Previously presented) A method for treating migraine headaches in a mammalian subject in need thereof, comprising administering a cation chloride cotransporter antagonist to the central nervous system of the subject.

46. (New) The method of claim 45, wherein the cation chloride cotransporter antagonist comprises thiazide or a thiazide-like composition.

47. (New) The method of either of claims 21 or 38, wherein the treatment composition is administered transdermally for delivery to the CNS.

48. (New) The method of either of claims 21 or 38, wherein the treatment composition is administered in a sustained release formulation.

49. (New) The method of either of claims 21 or 38, wherein the treatment composition is administered in a dosage incorporated in a non-reactive carrier.

50. (New) The method of either of claims 21 or 38, wherein the treatment composition is delivered in a liposome formulation.

51. (New) The method of either of claims 21 or 38, wherein the treatment composition is administered by implantation of a formulation or therapeutic device at one or more target sites for delivery of the treatment composition to the CNS.

52. (New) The method of claim 51, wherein the formulation or therapeutic device is actuatable externally upon onset of symptoms to deliver predetermined amounts of the treatment composition.

53. (New) The method of either of claims 21 or 38, wherein the treatment composition is administered in combination with a hyperosmotic agent.

54. (New) The method of claim 21, wherein the treatment composition consists essentially of a $Na^+K^+2Cl^-$ cotransporter antagonist.

55. (New) The method of claim 38, wherein the treatment composition consists essentially of a loop diuretic.